Hybrid ceramics in practice
A CAD/CAM material for patients with functional disorders

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The treatment of patients with functional disorders is a challenge for dentists. The extent to which the VITA ENAMIC hybrid ceramic (VITA Zahnfabrik, Germany) with its dentine-like elasticity may be a suitable material for treating patients with bruxism is described in this article. Although reconstructions with VITA ENAMIC are still experimental for this indication, I have already implemented them experimentally for this indication, and clinical success has already been achieved with VITA ENAMIC hybrid ceramic (VITA Zahnfabrik, Germany) with the VITA ENAMIC hybrid ceramic for dentists. The extent to which functional disorders is a challenge in treatment of patients with functional disorders is a challenge for dentists.

Figures 1 to 3

Fig. 1: Initial situation.
Fig. 2: The extra-oral examination showed a reduced lower third of the face.
Fig. 3: Intra-oral examination: Situation at maximum intercuspation.

Preliminary treatment

After the patient’s referral to our clinic, we first tried to stabilise the occlusion via a reversible correction of tooth position. The optimal length of the incisal edges, the occlusal plane, and the horizontal and vertical dimensions were determined with a maxillary bite registration in wax (Fig. 4). It was shown that, through an elevation of the vertical dimension by 8 mm, a correction of the Angle Class III relationship was possible.

Figures 1 to 3 show the initial situation.

The patient had rejected the corrective jaw surgery recommended for the existing Class III skeletal abnormality owing to the uncertain therapy outcome. Figures 1 to 3 show the initial situation.

Initial situation

The 48-year-old patient had suffered for ten years from severe temporomandibular joint pain and headaches, resulting in depression, which had led to his inability to work. Numerous visits to the dentist and treatment attempts (including occlusal splinting) had brought no relief. The patient had rejected the corrective jaw surgery recommended for the existing Class III skeletal abnormality owing to the uncertain therapy outcome. Figures 1 to 3 show the initial situation.

Summary

With the integration of the VITA ENAMIC restorations (Figs. 12–14), the patient’s self-confidence increased and he took up a new profession. This example shows that the non-invasive treatment concept presented can achieve outstanding results, leading to a significant increase in quality of life, even in patients with extreme functional problems.

Fabrication of the definitive restorations

For the precise transfer of the optimal tooth position, the digital moulding was performed once with and once without the splint. The superimposed scans formed the basis for the virtual design of the monolithic restorations made of VITA ENAMIC (Figs. 8 & 9).

After fabrication, these were characterised and polished (Figs. 10 & 11).

When tried in, they exhibited a high-precision fit, and the patient was very satisfied with the shade, therefore, the adhesive bonding was performed immediately. In order to create an invisible transition to the tooth substance, pre-warmed composite filling material was used.

Figures 1 to 4 show the initial situation.
Figures 5 & 6: Superimposition of the data sets of digital moulding with and without the splint.
Figures 7 to 10: Steps of the determination of the optimal vertical dimension.
Figures 11 to 13: Determination of the optimal vertical dimension.
Figures 14: End result.

Figures 1 to 3 show the initial situation.